and prosperous district of Barrow-in-Furness is indebted, in a great degree, for its marvellous recent development to his early appreciation of its capabilities, as well as to his engineering skill; its harbour, docks, and railways were all constructed under his direction. The South Staffordshire Railway, the Wolverhampton, Birmingham, and Dudley Railway, the South Staffordshire Waterworks, and many other large undertakings, were carried out under his superintendence. He was also, on the death of Mr. James Walker, appointed by Government to be engineer of the harbours of Dover, Alderney, and St. Katherine's, Jersey; and of the Plymouth Breakwater and Shovel Rock Fort.

The confidence reposed in Mr. M'Clean's talents and judgment was also further evinced by the numerous Royal Commissions on which he was called to act, including those on the designs for the Thames Embankment, the Commission on Railways, the Sanitary Commission, and others.

Mr. M'Clean was consulted by the late Emperor Napoleon, with reference to some of his contemplated improvements at Paris, and he carried out extensive works there for the Emperor. He was also one of the engineers invited by the Viceroy of Egypt to examine and report upon the Suez Canal. He was a member of the Institution of Civil Engineers, and President during the years 1864 and 1865, and was elected a Fellow of this Society on January 8, 1858. He was also a Fellow of the Royal and of other learned Societies, and represented the Eastern Division of Staffordshire in the late Parliament.

During the last years of his life Mr. M'Clean's health was seriously impaired, and he suffered from an illness of which he ultimately died on July 13, 1873. His private worth and active kindliness of heart, no less than his professional eminence, will cause him to live long in the memories of the wide circle of friends whom his genial disposition had attached to himself; and his numerous acts of unostentatious kindness and generosity will make his loss deeply regretted by those, and they are many, who have been aided and befriended by him in their struggles and difficulties. G. P. B.

Frank Robertson, late First Lieutenant Royal Madras Engineers, was born in London in the year 1838. He was the youngest and last surviving son of the late Robert Robertson, Esq., of Auchleeks, Perthshire. In 1854 he commenced his professional studies at Addiscombe, where he soon became one of the most successful students of the College, especially in chemistry, the prize for which he gained in his first term, an honour which till then had been considered as belonging exclusively to the senior students. After practically studying his profession at Chatham, he went in 1859 to Madras, having been appointed to the Madras Engineers, where he was employed on many important works; but in consequence of a severe illness, produced by an incautious exposure to the sun at Nagpore during the performance of his

duties, he returned to England in the winter of 1861 in a very weak condition. He had already superintended the construction of several military buildings to the satisfaction of his commanding officer, and doubtless would have further distinguished himself in his corps, but owing to some difficulty in his obtaining a medical certificate without considerable delay, which his dangerous state of health would not permit, he resigned his commission before leaving India.

Lieutenant Robertson had a great natural taste for civil engineering, both in theory and practice, and on his recovery he returned to India as a civil engineer, but his health again soon broke down, and he was once more driven home. His devotion to his profession was, however, so great that a third time he proceeded to India, when he soon found employment under the Department of Public Works, latterly at Murree, under the direction of Colonel Maclagan. In this capacity his talents were duly appreciated by the Government; but his health, which had never been perfectly restored since his first illness, compelled him, after a time, to relinquish his office, and to seek a more bracing climate. During the Franco-Prussian war he went to Darmstadt, where he joined a company of young men who devoted themselves to the care of the wounded soldiers. His health being again fairly restored, Mr. Robertson left England for India in January 1873, determining once more to brave the hot climate which, on so many previous occasions, had ever proved his greatest enemy. He was employed in the Punjaub on some important public works; among them a bridge of boats was constructed and maintained by him at a very critical time, when the railway bridge over the river Sutlej had given way, and when the other bridges of boats in the same locality had all been carried away by the floods. An extract from a characteristic letter written by Mr. Robertson to his sister, dated Phillour, June 4, 1873, exhibits his devotion to his work at a time when the strain on his mind was very severe: "I am so glad about the bridge. The Punjaub Government say it is the most important work in the whole division, and no doubt it is so; they have done their utmost to urge me to hold on till the railway bridge could be restored, and now it is all finished and all right. The other bridges are for mere road communication over the Jhelum, Ravichenab, Beas, &c., and all have given way weeks ago; mine alone bears the railway traffic, and each day it has been kept open the Government has gained 200*l.* sterling." A few months afterwards he suffered from an acute attack of dysentery, and was advised to return to Europe immediately. He left Bombay about the middle of September, and died on board the Peninsular and Oriental steamship *Tanjore*, near Aden, on September 27, 1873, at the early age of thirty-five.

In 1871 Mr. Robertson published a most valuable series of tables for facilitating the construction of arches, which cannot fail to be of great practical use to engineers. He was much

attached to this Society, of which he was elected a Fellow on February 11, 1859. E. D.

Sir DAVID SALOMONS, Bart., was born in the year 1797. Following the example of his father, a London merchant and underwriter, he entered at an early age into the busy affairs of commercial life, and soon became a most prosperous City merchant. Although, at this time, his thoughts were necessarily engrossed with the cares of business, giving him but little leisure-time for other occupations, yet he had a considerable taste for science, and especially for astronomy, which made him seek the society of men with kindred spirits, among whom were some distinguished Fellows of the Royal Astronomical Society. He was himself elected a Fellow of the Society on March 12, 1830, and he at once took a considerable interest in its proceedings at the ordinary meetings. For many years he continued in friendly association with the leading members of the Society, including our late esteemed President, Francis Baily; but though he was always ready with his counsel, the absorbing occupation of his time in his daily business prevented him from devoting that attention to astronomical pursuits which his natural taste for the science would otherwise have led him to follow. To enable him to carry out his magisterial duties in a satisfactory manner, as an Alderman of London, to which office he was elected in 1847, he studied law in middle life, and was called to the Bar at the Middle Temple in 1849. He served the office of Sheriff of London and Middlesex in 1835–36, being the first member of the Jewish persuasion elected to that important office; he was also High Sheriff of Kent in 1840, and Lord Mayor in 1855. He continuously represented the borough of Greenwich in Parliament from 1859 to the time of his death, which took place on July 18, 1873, at the age of seventy-six. It is a curious coincidence that Greenwich, the natural home of astronomy, was represented in Parliament from 1865 to 1868 by two Fellows of the Royal Astronomical Society, Alderman Salomons and Sir Charles Bright. Sir David was created a Baronet in 1869, with special remainder to his nephew.

JOHN STANISTREET was a native of Liverpool, the son of an eminent solicitor, who had an extensive practice, and was associated with some of the chief families there. He was, however, cut off in the prime of life—which, possibly, may have somewhat influenced the occupations and future destinies of his several sons.

The second son, John, very early exhibited considerable talent, which was especially developed in a decided taste for chemistry, electricity, and various departments of mechanics; leading him, amongst other contrivances, to the construction of an electrical machine and two small steam-engines. As he grew up, however, it became necessary for him to choose a profession, and he